**Tamarixia triozae: a parasitic wasp of tomato potato psyllid**

**RELEASE GUIDE**

**RELEASE SITE CHECKLIST:**

- Check that tomato potato psyllid nymphs are present and ideally present year-round.
- Presence of eggs and adults is also important, to indicate availability of nymphs for the parasitic wasp in the future.
- Tomato potato psyllid host plants are present year round.
- No insecticides are applied at or near the release sites.
- Release Tamarixia on a fine day.
- Record the location of your release sites.

**SELECTING A RELEASE SITE**

To maximise the initial survival and establishment of the parasitic wasp, *Tamarixia triozae*, in the field, release sites need to be:

- Where year-round populations of tomato potato psyllid (TPP) occur and
- No insecticides are applied in or near the release sites.

For convenience we refer to the wasp as *Tamarixia* throughout this guide.

Choose a reasonably sheltered position where TPP nymphs are present (Figure 1b). *Tamarixia* prefer to feed on smaller nymphs and parasitise larger nymphs. Ideally there should be a range of different TPP life stages (eggs, nymphs and adults, Figure 1) present at your release site, as this gives a good indication that there will be nymphs present at that site in the future.

For the long-term successful establishment of *Tamarixia* there must be populations of TPP available year round in consecutive years at the release site.

The host plants of TPP are mainly within the Solanaceae family. Major crop host plants include tomato, potato, capsicums, chilli peppers and tamarillos. Non-crop host plants include *African boxthorn* (*Lycium ferocissimum*) and the native poroporo (*Solanum aviculare* and *Solanum S. laciniatum*) (Figure 2, over page).

**TIMING OF RELEASE**

TPP numbers peak during summer and early autumn, which provides a good window for the release of the parasitic wasp. If TPP populations are high, *Tamarixia* will more easily find a suitable host and increase their population.

*Tamarixia* develop best at temperatures between 5˚C and 35˚C, with optimum development at around 24˚C.

To give *Tamarixia* the best start at your release site, release them on a fine day.

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**Figure 1.** (a) A tomato potato psyllid adult and eggs and (b) a nymph. Photographs: (a) M Heffer, Plant & Food Research; (b) R. Lamberts, Plant & Food Research.
Once the site has been selected and you have received your parasitoids in a vial, transport them to your site as soon as possible. Ensure that the Tamarixia are not exposed to extreme temperatures during transport, storage, or at the release site.

Find TPP nymphs at your release site. Open the vial close to the TPP nymphs. The parasitoids can be released from the vial either by aiming the opening of the vial towards the nymphs and gently flicking the base of the vial, or by attaching the vial directly onto the plant or stake using a twist tie.

Note down the date, time of release, weather conditions and location of the release. Recording the location of the release site is especially important when it comes time to do your post-release surveys in the following summer to determine if the Tamarixia have survived over winter at your release sites.

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**FURTHER INFORMATION //**

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